ADDRESSABLE RESETTABLE MANUAL CALL POINT

IPR 513-3AM rev.01

ИСО 9001

INSTRUCTION MANUAL

1 TECHNICAL DATA

1.1 General

IPR 513-3AM rev.01 Addressable Resettable Manual Call Point (hereinafter referred to as the call point) is to be used with a polling loop controller S2000-KDL or S2000-KDL-2I (hereinafter referred to as the PLC) within an Orion integrated security system. The call point is intended for triggering a fire alarm or initiating a fire suppression system manually.

The call point is powered and communicates data with the controller over the controller's Polling Loop (hereinafter referred to as the PL).

The call point supports DPLS_v2.xx Multiplex Addressable Polling Loop Protocol providing monitoring PL voltage at the detector's location. The version of IPR 513-3AM rev.01firmware is 1.01.

The call point is equipped with a built-in short circuit isolator (BRIZ).

The transparent protective flip cover of the call point can be sealed.

The call point is intended for round-the-clock operation.

1.2 Specifications

1)	Polling Loop Voltage	- 8 to 11 V
2)	Consumed Current (Quiescent mode)	- 0.6 mA max
3)	Consumed Current (Active BRIZ)	- 3 mA max
4)	Pre-operation Time	- 15 s max
5)	BRIZ Activation Time	- 0.2 s max
6)	Ingress Protection Rating	- IP41
7)	Operating Temperatures	- Minus 30°C to +55°C
8)	Relative Humidity	- Up to 93% at 40°C
9)	Transportation and Storage Temperatures	- Minus 50°C to +55°C
10)	Overall Dimensions	- 94 mm × 90 mm × 33 mm
11)	Weight	- 0.15 kg max
10)	Average Lifetime	- 10 years min

1.3 Standard Delivery

For an *individual* delivery:

– IPR 513-3AM rev.01 Manual Call Point	- 1 pc.;
– Instruction Manual	- 1 pc.;
– Special Key	- 1 pc.;
– Woodscrew	- 2 pcs.;
– Wall Plug 8×30	- 2 pcs.;
– Package	- 1 pc.

For a *group* delivery:

– IPR 513-3AM rev.01 Manual Call Point	- 10 pcs.;
– Instruction Manual	- 1 pc.;
– Special Key	- 10 pcs.;
– Woodscrew	- 20 pcs.;
– Wall Plug 8×30	- 20 pcs.;
– Package	- 10 pcs.;
– Group package	- 1 pc.

2 OPERATION INSTRUCTIONS

2.1 Wiring

Figure 1 shows a typical schematic for connecting the call point into the PL. The built-in BRIZ is symmetrical. The contacts 1 and 3 ("+PL") are isolated from each other while contacts 2 and 4 ("-PL") are coupled. Figure 2, Figure 3, and Figure 4 show wiring diagrams for ring, tree, and mixed loop topologies respectively.

In PLC configuration the input type for the call point is set to the value "3" ("Heat Fire") or "16" ("Manual Fire"). To get more information about configuring and input types please refer to the manuals of PLC, S2000M panel, or Orion Pro Suite.
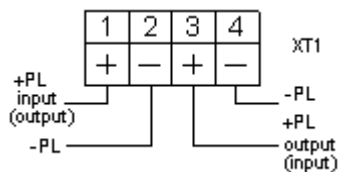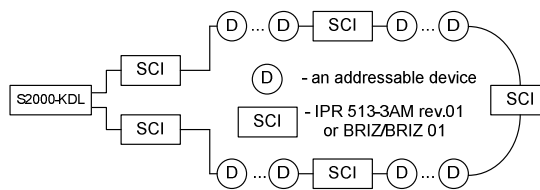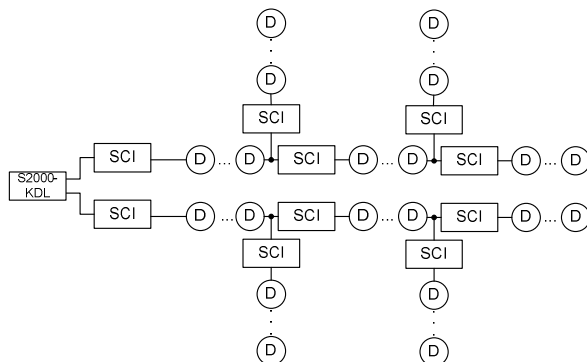
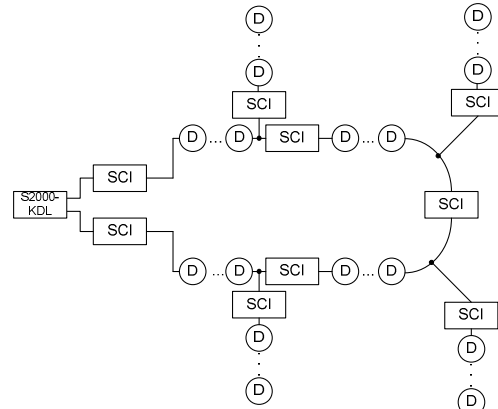

Figure 1

Figure 2

Figure 3

Figure 4

2.2 Mounting

The call point is to be mounted using the two screws provided to a flat vertical surface in accordance with your applicable local standards, codes, regulations, and ordinances.

The wires which pass under the call point should not be clamped by the call point case.

Figure 5 shows the view of the call point (without the protective flip cover):

- **1**: The hole to insert the key to reset the activated call point;
- **2**: The hole to insert the key to open the call point case;
- **3**: The special key to reset the activated call point and to open its case;
- **4**: The Fire Button to activate a fire alarm;
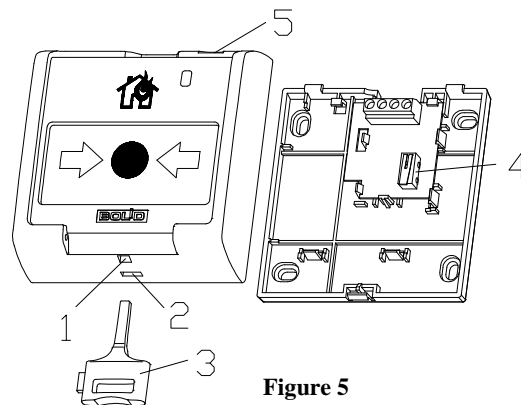- **6**: The place to apply a seal.

Figure 5

2.3 LED Indication

Table 1 describes indication of the operation modes of the call point.

Table 1

LED Performance	Condition (Event)
Flashes every 4 seconds	OK
Flashes twice every 4 seconds	Fire Alarm (the Fire Button is activated)
Flashes four times every 4 seconds	Programming

2.4 Estimation of the Number of the Call Points to Be Brought into a Polling Loop

The number of the call points that can be brought into the PL can be estimated using the formula below:

$$N = (0.1 \ \mu F - C_{PL}) / 0.0005 \ \mu F,$$

Where **N** is for the number of call points;

C_{PL} is for the total electric capacity of the polling loop wires in μF.

While using the call points, the resistance of the polling loop should be estimated with regard to the total resistance of the built-in BRIZes in the connected call points, the resistance of a single call point being estimated as 25 mOhms.

2.5 Programming a Call Point Address

The call point provides storing its polling loop address in its non-volatile memory. The address can be assigned in the range of 1 to127. The factory value of a call point address is 127.

In order to assign a polling loop address to the call point, send one of the following commands from the S2000M panel or the connected personal computer to the PLC:

Program the Device Address

If the call point address is unknown or two devices have the same address then use the *Program Device Address* command specifying a required address as the parameter. When the call point receives the command its LED starts flashing four times every four seconds. Then, within 5 min open the call point case and press the Fire Button (position 4 in Figure 5) down three times for a long time (longer than 1 second but shorter than 3 second) and once for a short time (shorter than a half of a second). Verify that a message about detecting the device with the newly assigned address is displayed by a network controller (S2000M) or UProg Configuration Tool.

Change the Device Address

Use the *Change Device Address* command specifying the old device address and the new device address as the parameters (see more information in the referred Manuals). The network controller will display the messages about disconnecting the device with the old address and then detecting the device with newly programmed address.

2.6 Routine Testing

2.6.1 Before testing the call point, please disconnect executive outputs of all system devices and modules that can release an extinguishing agent or activate light and sound alarms. Notify the proper authorities that the system is undergoing maintenance.

2.6.2 Arm the call point by means of the S2000M panel or the PC.

2.6.3 Activate the call point by pressing the Fire Button. Verify that the call point's LED flashes twice every four seconds indicating triggering an alarm and that a fire alarm is received by the network controller.

2.6.4 Reset the call point to its Norm state by inserting the special key provided. Verify the call point LED starts flashing once per 4 s. From the console or PC issue a command to cancel the alarm sent5 by the call point.

If no fire alarm has been received by the network controller, it means that the call point is defective and must be replaced.

2.6.5 Repeat steps 2.6.2 - 2.6.4 three times or more.

2.6.6 Check activation of the built-in short circuit isolator (BRIZ). To do so, couple a "-PL" contact of the XT1 contact block with the contact 1 ("+PL"). If tree topology is in use, the network controller shall display messages about missing the addressable devices which are connected father than the call point. If, otherwisw, ring topology is in use, the network controller shall display messages about missing the addressable devices which are between the call point and the next device with a short circuit isolator, without disconnecting the call point itself. Then disconnect the contacts "+PL" with the number 1 and "-PL". Verify the network controller indicates detecting the devices which were disconected before. Next, repeat this step for the contact 3 ("+PL") and the contact "-PL".

Avoid coupling the contacts "-PL" and "+PL" which are connected directly to the PLC output.

2.6.7 After testing, verify that the call point is ready to operate properly. Then restore operability of all the system components disconnected before testing and notify the proper authorities that the system is back in operation.

2.6.8 Inspect activation of the call point at least once per three months.

All the equipment used in testing must be known functioning.

2.7 Maintenance

2.7.1 Inspect operation of the call point as discussed in Section 2.6 annually.

2.7.2 Inspect activation of the call point when the call point sends trouble messages.